



MCK EXTender™ 7000 for Branch Offices

This integrated networking equipment provides the full functionality of the corporate voice systems to remote employees, regardless of their location or network connection, and offers rich local calling capabilities and survivability to branch offices

The MCK EXTender 7000 is integrated networking equipment that resides at the remote branch office location and communicates with the corporate voice system via the EXTender PBXgateway II.

Branch office users rely on the MCK EXTender 7000 for convenient, reliable and affordable connections to the corporate voice system and to bring them closer to their local customers, partners and suppliers.

This solution is ideal for companies with geographically dispersed branch offices with 13 workers or more and that typically have a moderate to high level of communication both locally and with the corporate voice system.

MCK's Distributed Voice Solutions affordably and seamlessly extend the features and functionality of existing corporate voice systems to:

- Branch Offices
- Call Centers

across traditional and next-generation networks.



PRODUCT OVERVIEW

More and more, organizations today find themselves needing to expand into new regions to bring their operations closer to customers, partners and suppliers, or to draw from a larger pool of qualified resources, or simply as a result of mergers and acquisitions. As expansion costs can be considerable, organizations look for ways to leverage existing investments and resources across locations. MCK solutions provide maximum flexibility for such organizations by meeting both their immediate needs as well as positioning for future growth into larger offices, new technologies and networks.

The MCK EXTender 7000 for Branch Offices is the latest multi-user offering from MCK Communications. It is an integrated networking product that delivers rich local calling capabilities, access to local trunk lines and the full functionality of the corporate telephone system to remote offices over circuit- and packet-based networks.

The MCK EXTender 7000 for Branch Offices seamlessly and affordably connects remote offices to corporate resources, eliminating the barriers between voice and data, remote and corporate, local and national, country and world.

Deceptively small for its considerable power, the MCK EXTender 7000 serves as the conduit for communication convergence by aggregating, prioritizing and sending both the voice and data traffic originated at the remote branch office to the corporate voice and data networks.

With the MCK EXTender 7000, you have instant access to the corporate voice system. Although the system may be located across the state, country or world, you make and receive calls as if the system and the local telephone company (aka Local Exchange Carrier or LEC) were merely at arms length. The voice system can be an Avaya™ DEFINITY® or an ECLIPS Media Servers and Gateways, a Nortel Meridian® or a Nortel Norstar® and the WAN network connection may be circuit or packet-based. MCK lets you choose what suits your specific situation best for today yet allows maximum flexibility for future expansion. The MCK EXTender 7000 also enables any phone connected to the corporate voice system to use the branch office's local lines resulting in significant telecommunication cost savings for the organization.

MCK EXTender™ 7000

The MCK EXTender 7000 unites business office telephony across the entire corporation. Regardless of location, your employees have access to the rich set of corporate voice system features and functionality on all calls, whether placed over the WAN connection or the local lines. Plain old telephone service (POTS) continues to be available even when the WAN connection to the central system fails. System administrators and telecommunication managers appreciate the inherent survivability and remote management capabilities of the MCK EXTender 7000. Moves, adds and changes are amazingly easy and can be done from a central location. And these are just a few of the many features and benefits available on the MCK EXTender 7000 for Branch Offices.

The MCK EXTender 7000 is equipped with dual console ports (see picture below). These ports allow a system administrator to attach a modem to one and use the other for a local terminal connection. This versatility makes remote troubleshooting and maintenance a breeze.



FRONT VIEW

Two DB-9 console ports for easy system management

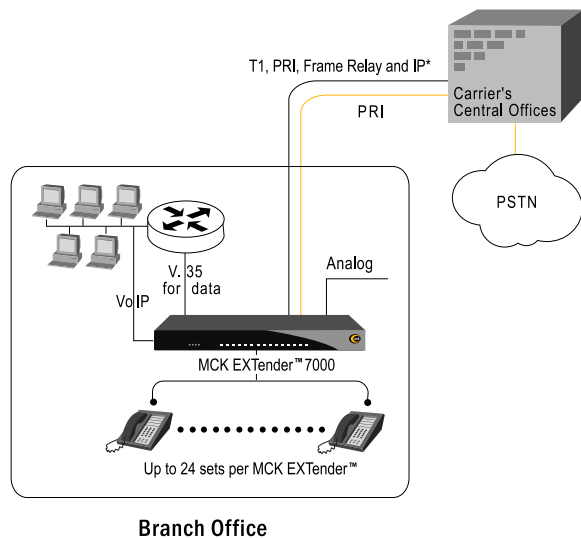
KEY BENEFITS

• Unified Communications and Centralized Management

Each employee, whether at the corporate headquarters or a branch office, is on the same voice system and dialing plan and has access to the same features and applications resulting in an increase in employee productivity, an improvement in customer service and a unified image.

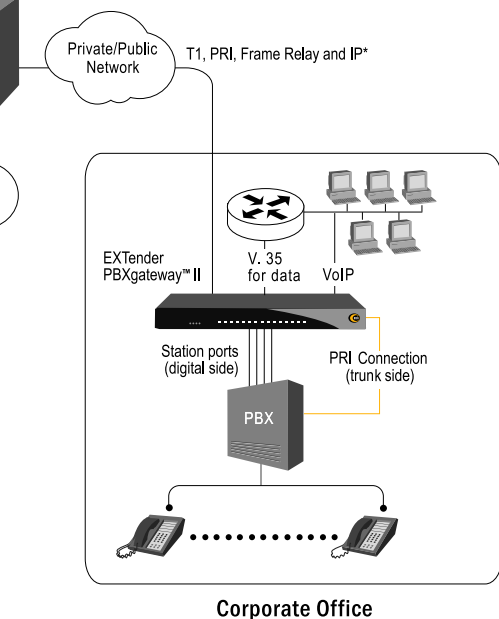
Day-to-day management of the branch office's users can be done from a central location, including moves, adds and changes, as well as system performance monitoring. The MCK EXTender 7000 can be remotely managed through a variety of remote access options, and users' port configurations and permissions are controlled at the central voice system as if all employees were physically under one roof.

- Improved Return on Investment
Decentralized organizations with multiple sites can leverage the full functionality of a single voice system and its supported applications. No need to purchase an expensive and hard-to-network voice system or supported business applications for each remote branch office.
- Network Efficiency
Ability to directly terminate the network reduces footprint and wiring requirements at both the corporate and remote office locations. The complete MCK EXTender 7000 and EXTender PBXgateway II solution is outfitted with a built-in T1, PRI and frame relay interface eliminating the need to purchase external network access devices to connect to the Wide Area Network (WAN). In addition, the dual port integrated network card enables the aggregation of voice and data traffic for transmission to the main office as well as the provisioning of local dialing trunks for the remote branch office.



* Terminated thru router.

- WAN Bandwidth Conservation
The MCK EXTender 7000 processes the audio portion of calls made to either extensions at the branch office or to the local area, resulting in WAN bandwidth preservation. The MCK EXTender 7000 only sends the voice traffic over the WAN link when voice features are invoked.
- Business Quality Voice on Local Calls
The MCK EXTender 7000 relies on its voice hairpinning feature to guarantee business quality voice on calls made and received using the local trunk lines.
- Survivability
Branch office employees connected to the MCK EXTender 7000 are able to place and receive local and emergency calls even when the WAN link to the corporate voice network is down.



KEY FEATURES

- **Dual Port Integrated Network Card**
The built-in network card available on the MCK EXTender 7000 terminates up to two (2) T1, PRI on frame relay lines¹ eliminating the need for separate CSUs or DSUs.
- **DSU Functionality**
The integrated network card enables the MCK EXTender 7000 to be the single network termination device for both voice and data traffic at the remote branch office.
- **Rich Local Calling Capabilities With Full Access to corporate voice system Features**
Multiple channels can be allocated from the T1 or PRI line for use as local trunk lines. The MCK EXTender 7000 manages voice traffic on calls made or received on the local trunk lines.
- **Long-distance Toll Bypass**
Any user connected to the corporate voice system can be configured to access a local trunk line on the MCK EXTender 7000 when placing a call to the branch office's local area.

GENERAL SET-UP GUIDELINES

- The MCK EXTender 7000 connects across the WAN to the EXTender PBXgateway II installed on the digital line side of the corporate voice system and terminates the digital sets at the branch office.
- Every MCK EXTender 7000 comes equipped with a dual port network interface card required for the direct termination of up to two T1, PRI or frame relay lines.
- When running MCK's Remote Voice Protocol™ (RVP) over circuit-switched networks, the MCK EXTender 7000 interfaces directly with the network via one of the network interface ports.
- The MCK EXTender 7000 can be configured to run on IP transport over circuit-switched, frame relay and IP networks.
- When running MCK's Remote Voice Protocol over Internet Protocol™ (RVPoIP) over IP-based networks, the MCK EXTender 7000 connects to an IP-capable CSU/DSU or router via one of the 10/100Base-T ports. The CSU/DSU or router must be configured to provide Quality of Service* (QoS) support in order to guarantee voice quality in RVPoIP applications.

- Configuration and programming can be accomplished via either an HTML interface, or through a console interface using a dialup modem, direct serial connection, Telnet, or inband RVP.

- **Comprehensive Survivability**
Local-hosted mode:

When the WAN link between the MCK EXTender 7000 and the EXTender PBXgateway II goes down, users at the branch office can access the local trunk lines to place and receive calls via the PSTN.

Emergency mode:

A single analog port provides Plain Old Telephone Service (POTS) for emergency calls in the event of a wide area network failure.

SYSTEM COMPATIBILITY

- Avaya™ DEFINITY® ECS (all G3 releases) and ECLIPS Media Servers and Gateways (digital phones only)
- Nortel Meridian® and Nortel Norstar®



BACK VIEW

CONNECTORS INCLUDED IN BACKPLANE OF UNIT:

- Internal power supply
- One RJ-11 Analog port for POTS (emergency backup line)
- Network interface card with two RJ-45 connectors
- Two RJ-45 10/100Base-T Ethernet (AUX LAN for RVPoIP and/or remote management; LAN for RVPoIP traffic)
- Two DB-25 WAN ports for serial RVP connection. Redundant interfaces include V.35, RS-232 or RS-530
- One Amphenol connector for 50-pin RJ-21 cable for interface with digital telephone sets

MCK EXTender™ 7000

QUICK REFERENCE CHART

SOFTWARE SUPPORT

- TCP/IP protocol support for IP traffic and management access
- RVPoIP uses UDP/IP protocol for voice transmission
- Serial RVP uses HDLC encapsulation for voice transmission
- Management and Utilities - Telnet, inband RVP, RS-232 console interface, SNMP and HTML

OPERATING SYSTEM & UPGRADE

- Wind River's VxWorks® operating system
- Software upgradeable via LAN FTP, RS-232 serial port to PC, or inband connection between the MCK EXTender 7000 and the EXTender PBXgateway II

VOICE PROTOCOLS

- Choice of voice compression standards:
G.729A (8 kbps)
G.726 (24 or 32 kbps ADPCM)
G.711 (64 kbps PCM)
- G.165 echo canceller software, with MCK proprietary double-talk detection enhancement
- MCK Remote Voice Protocol (RVP)
- MCK Remote Voice Protocol over IP (RVPoIP)
- IP voice packets are tagged for network traffic prioritization using IP Precedence or DiffServ

HARDWARE

- Form Factor: Low profile, 1U rack mountable unit

Other Components:

- Motorola MPC860T processor
- 16 MB Flash Memory, 16 MB SDRAM
- DSP Analog Devices 2185 (52 MIPS)

WARRANTY

- One-year limited warranty for parts and labor

MCK EXTender™ 7000	MCK EXTender™ 6000
Best suited for organizations with branch offices located outside of the corporate voice system's local calling area	Addresses the needs of branch offices within the corporate voice system's local calling area
Includes integrated WAN interface	Uses external network termination equipment such as a router
Cost-effective solution for sites with 13 or more users per location	Cost-effective solution for 12 or fewer users per location
Best solution for geographically disperse businesses looking for robust local calling capabilities and survivability options	Best solution for businesses with low requirements for access to local trunk lines (i.e., inbound/outbound call centers, regional businesses, etc.)
Easily scaleable in 24-user increments	Easily scaleable in 8 and 12-user increments

POWER SUPPLY

- Internal
- Universal auto ranging
- Line voltage: 100 – 240 V
- Frequency: 47 – 63 Hz
- Maximum power consumption: 75 Watts

DIMENSIONS

- Size: 17" x 11" x 1¾"
(432mm x 280mm x 44mm)
- Weight: 8.0 lbs (3.6 kg)

OPERATING ENVIRONMENT

- Temperature: 32° - 130° F (0° - 55° C)
- Relative humidity: 5 to 95% (non-condensing)

REGULATORY APPROVALS

- FCC Part 15 Class A and FCC Part 68, CE Mark, Industry Canada CS-03, NRTL/CSA, VCCI Class 1 and CISPR 22 Class A



Product specifications subject to change without notice.

*MCK's IP-based products utilize Voice over IP (VoIP) technology to deliver remote voice solutions. The voice quality of these solutions is dependent on variables such as available bandwidth, network latency and quality of service (QoS) initiatives, all of which are controlled by the network and Internet service providers. Because these variables are not in MCK's control, it cannot guarantee the performance of the user's IP-based remote voice solution.

†Software release 3.1 is required for direct termination of frame relay. MCK, the MCK logo, MCK EXTender, PBXgateway, RVP and RVPoIP are trademarks of MCK Communications, Inc. Other brand and product names referenced herein are trademarks of their respective holders.

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